Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

(For permits requiring public notice)
CONDITIONAL MAJOR (DRAFT) NO. F-05-045 R2
SUMMIT POLYMERS, INC.
MOUNT STERLING, KY
NOVEMBER 21, 2008
REVIEWED BY LUIS D. FUENTES

SOURCE I.D. #:	021-173-00024
SOURCE A.I. #:	3196
ACTIVITY #:	APE20080001

MINOR REVISION F-05-045 R2:

On October 13, 2008, the Division for Air Quality (DAQ) received an application for a minor revision from the Summit Polymers, Inc. Mount Sterling facility. The number of injection molding machines would increase from 28 to 30. Emissions of VOC and HAP from these machines were calculated based upon the highest percentage of each component from the various MSDS for the different plastics processed at the plant. The potential emissions were not affected by the change since the total throughput through the injection molders did not increase. The application was deemed complete on November 21, 2008.

SOURCE DESCRIPTION:

Summit Polymers is a manufacturer of small plastic parts for the automotive industry. Products include air conditioning/heating vent dampers and louvers, cup holders, etc. With this revision, the source operates 30 injection-molding machines that produce the various automotive parts. These parts are then trimmed, inspected, and assembled. The mold "tree" and some rejected pieces and parts are then ground and recycled back through the molding system. Some of the parts, depending upon the desired final product, are sent to a series of eight (8) paint booths. The paint booths consist of small, hand-held sprayers with cartridge filters that are replaced once per shift. Painted parts are cured in a small infrared oven attached to the paint booths.

DAQ acknowledges receipt on July 1, 2003, of a renewal conditional major air quality permit application for the Summit Polymers, Inc. Mount Sterling facility. This represents the first renewal of the conditional major air permit. The permit history is summarized as follows:

Permit #	Permit type	Log or Activity#	Complete Date	Issuance Date	Summary of Action
F-98-020	Initial Issuance	F607/F741	7/31/98	9/21/98	F-98-020
F-05-045	Permit Renewal with Revisions	55855	8/30/03	9/15/06	Conditional Major Permit Renewal and Revisions
----	Off-Permit Change	APE20060001	1/19/07	--	Changing of Materials and Paints
F-05-045 R1	Permit Minor Revision	APE20070001	11/28/07	12/18/07	Remove 2 Injection Molders, 1 Paint Booth
F-05-045 R2	Permit Minor Revision	APE20080001	11/21/08	TBD	Addition of 2 Injection Molding Machines

The facility is classified as a conditional major source, and as such has accepted federally enforceable emission caps on VOC and HAPs to preclude the applicability of Title V permitting. Source-wide VOC emissions are limited to less than 90 tons per year, source-wide emissions of any individual HAP are limited to less than 9 tons per year, and source-wide emissions of all HAPs combined are limited to less than 22.5 tons per year.

Since the initial issuance of the conditional major permit, Summit Polymers has submitted several minor modification applications to the Division for adding or removing various affected facilities to/from the permit. Summit Polymers has applied for renewal of the initial conditional major operating permit, which also incorporated minor modifications to the facility. Since the original permit was issued, the removals and additions of affected sources have resulted in a current total of 30 injection-molding machines, six (6) grinders, and eight (8) paint booths.

The following is a list of significant emission units with applicable regulations:

EP 01 (01) Thirty (30) Injection Molding Machines

These machines produce the plastic parts for automotive applications, and are sources of small amounts of VOC and HAP emissions. Emissions of VOC and HAP were calculated based upon the highest percentage of each component from the various MSDS for the different plastics processed at the plant. No air pollution control devices are employed.

EP 02 (02) Six (6) Regrinders

These units regrind the mold "tree" and rejected parts to be placed back into the molding system. The grinders are enclosed systems with integrated emission controls, and are expected to have no significant emissions under normal operation. A conservative engineering estimate of 2 pounds of particulate matter per ton of emissions was used for development of the original permit, and has been carried over to be included in the renewal permit.

EP 03 (03) Eight (8) Paint Booths

These paint booths are equipped with small, hand-held sprayers to paint some of the molded automotive parts. The booths are equipped with cartridge filters for overspray control, with the filters replaced once per shift. The source uses several different types of water-based and solvent-based paint, some thinner, and cleanup solvent. Emissions of particulate matter, VOC and HAPs from the paint booths were calculated based upon the worst-case solids content for PM, or worst-case amount of each component as listed in the MSDS for the various coatings used at the plant. Current potential emissions from the paint booths are calculated using the same emission factors as those employed for the original permit.

COMMENTS:

The source is subject to the following applicable regulations:

1. 401 KAR 59:010, *New process operations*, applies to emissions of particulate matter (PM) from EP 02 and EP 03. The regrinders, EP 02, do not have the potential to exceed the applicable PM limits due to integrated controls. Total potential emissions of PM from the paint booths are less than the applicable PM limit before the filter controls are considered.

2. 401 KAR 63:020, *Potentially hazardous matter or toxic substances*, applies to the source as a whole. Pursuant to this regulation, the source may be required to perform dispersion modeling of emissions of ethyl benzene, methyl ethyl ketone, styrene, toluene and xylenes from the facility to demonstrate that the non-carcinogenic effects are below the reference concentration (RfC) for chronic inhalation exposure.

EMISSION AND OPERATING CAPS DESCRIPTION:

In order to preclude the applicability of Title V permitting, the source has requested source-wide caps to limit potential emissions to less than 90 tons per year of VOC, less than 9 tons per year for any single HAP, and less than 22.5 tons per year for combined HAPS.

Monthly emissions calculations are required for the source to demonstrate compliance with these emission caps. Permittee shall use less than 15120 gallons per year, on a twelve month rolling basis, of 50% content HAP paint.

PERIODIC MONITORING:
N/A

OPERATIONAL FLEXIBILITY:
N/A

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.